

The background is a dark blue gradient with a subtle pattern of white dots. Overlaid on the left side are several concentric circles and a large circular scale with degree markings from 140 to 260. Some circles have arrows indicating a clockwise direction.

# ANNUAL EDUCATION REPORT: PART II

**DAVID P HRABE, PHD, RN, NC-BC**  
**EDUCATION PROGRAM ADMINISTRATOR**

# OVERVIEW

- Review **key points** from the Education Part I report
- Discuss On-Time Graduation **trends** since 2014
- Differentiate between Program **OUTCOME** Index (2014-2016) and Program **QUALITY** Index (2017)
- Review **inverse relationship** between NCLEX and OTG
- Provide an overview of **HCA** and results
- Review **program stats** from CCNE accredited schools

# ACKNOWLEDGEMENTS

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- **Pam Fuller, EdD, MN, RN, Chamberlain College of Nursing**
- **Ronda Collazo, RN, PhD, Estrella Mountain Community College**
- **Tina Berry, PhD, MBA, HCM, Central Arizona College**
- **Lyn Ledbetter, AZBN, Education Department**

# ANNUAL SURVEY



## ARIZONA NURSING PROGRAM ANNUAL REPORT 2017

### DEMOGRAPHIC DATA (Section 1)

Name of Program:

Name of Administrator:

Name of Person to  
Contact Regarding this Data:

Contact Phone:

Contact E-mail:

*Definitions can be found on pages 10-11 of this packet.*

*Questions with a definition available will be preceded with a double asterisk ("")*

*Please complete all fields for pages 1-9 then data enter the information into the online survey beginning 12/15/17:  
<https://www.surveymonkey.com/r/2017AZBNannualreport1>*

**REPORT MUST BE SUBMITTED VIA SURVEY BY FEBRUARY 5, 2018**

*If you have any issues with this survey please contact: Lyn Ledbetter | Ph: 602-771-7856 | Email: [LLedbetter@azbn.gov](mailto:LLedbetter@azbn.gov)*



# ARIZONA NURSING PROGRAM ANNUAL REPORT - 2017 (Section 7)

## 7. Arizona RN Program Post-Licensure Graduates for Calendar Year 2017

7.A. Provide the following numbers regarding the total applications to your nursing program for all terms in 2017 calendar year. EXCLUDE PRE-NURSING APPLICATIONS.

This section is for schools accredited by CCNE. The data requested here is the same data requested by AACN with one exception: "RN to Bacc". RN to BSN is further divided into post-licensure RN-BSN programs and Concurrent Enrollment Programs (CEP).

	Generic Bacc 1	RN to Bacc 2	Concurrent Enrollment (CEP)	Nurse Practitioner 3	Clinical Nurse Specialist	Master's 4 Excluding NP&CNS	Doctoral (Research-Focused)	DNP
<b>Please Enter N/A if any of these columns do not apply to your program:</b>								
1. Number of positions/seats available, (Maximum number of new students your program could expect to accommodate, given your institution's resource constraints.) If the program can accommodate unlimited number of students, enter 999. Enter 000 if the program does not accept applications at this time.								
2. Number of completed applications received for the nursing program.								
3. Of those applications, how many applicants met all criteria (including interview) to be admitted?								
4. Of those students meeting all criteria to be admitted, how many were offered admission?								
5. Of those who were offered admission, how many enrolled and registered?								
6. Number of additional students who could have been accommodated by the nursing program. (calculate 1 - 5)								
7. Number of qualified applications that were not offered admission to the nursing program. (calculate 3 - 4)								

\*1 Generic Baccalaureate program includes accelerated Baccalaureate for non-nursing college graduates and LPN to BSN programs.

\*2 If your RN to Baccalaureate students are integrated into your Generic Baccalaureate program, please report application numbers under Generic Baccalaureate, and enter 888 for RN to Baccalaureate.

\*3 If you have a master's level combined NP/CNS program, please report application numbers under Master's NP.

Adapted data table used with permission of the American Association of Colleges of Nursing (2017).

### ADDITIONAL COMMENTS:


If you have any issues with this survey please contact: Lyn Ledbetter | Ph: 602-771-7856 | Email: LLedbetter@azbn.gov

NEW THIS YEAR

# EDUCATION REPORT: PART I

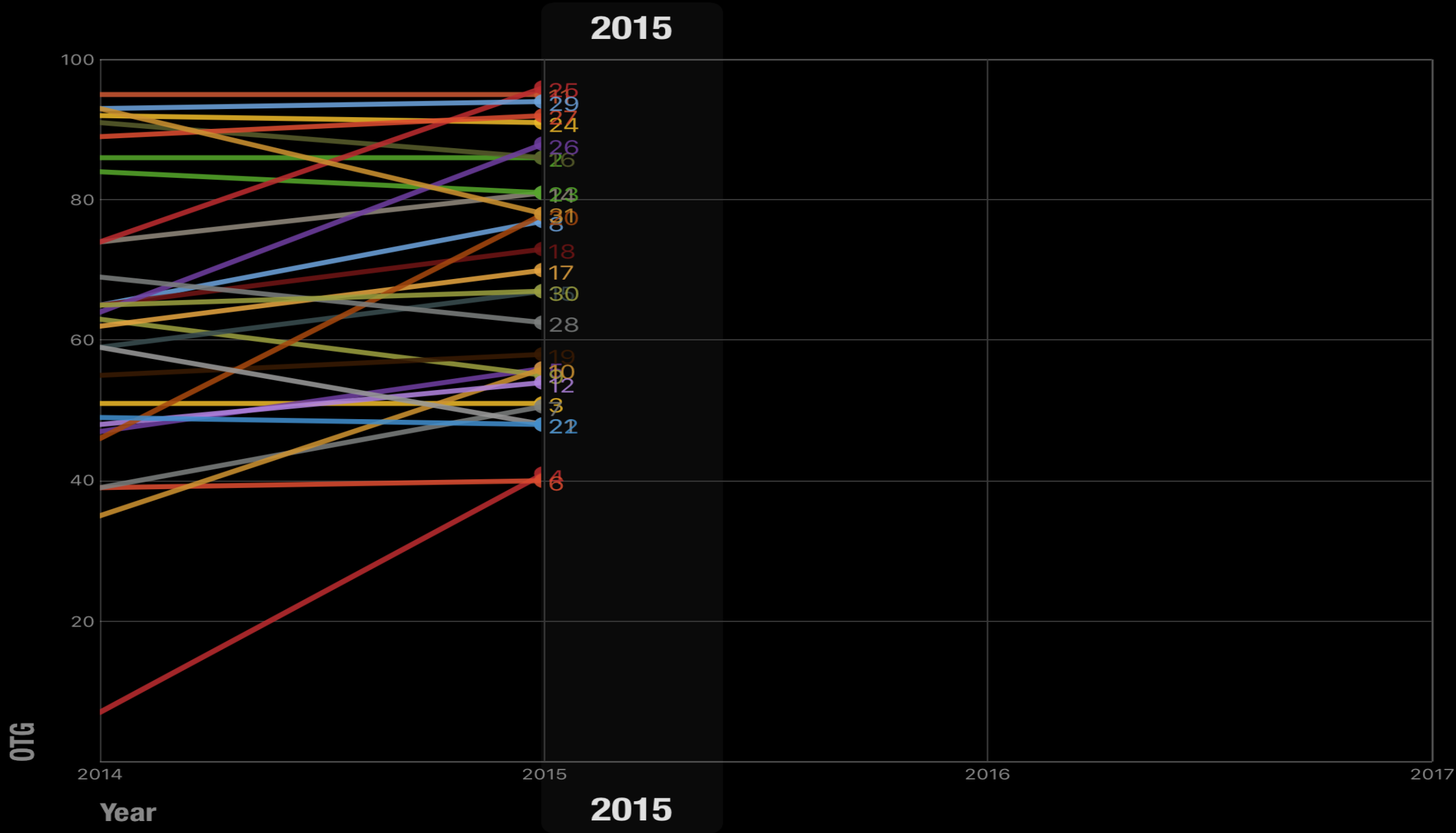
- School Profile
- Faculty Profile
- Student Profile
- Enrollment Trends

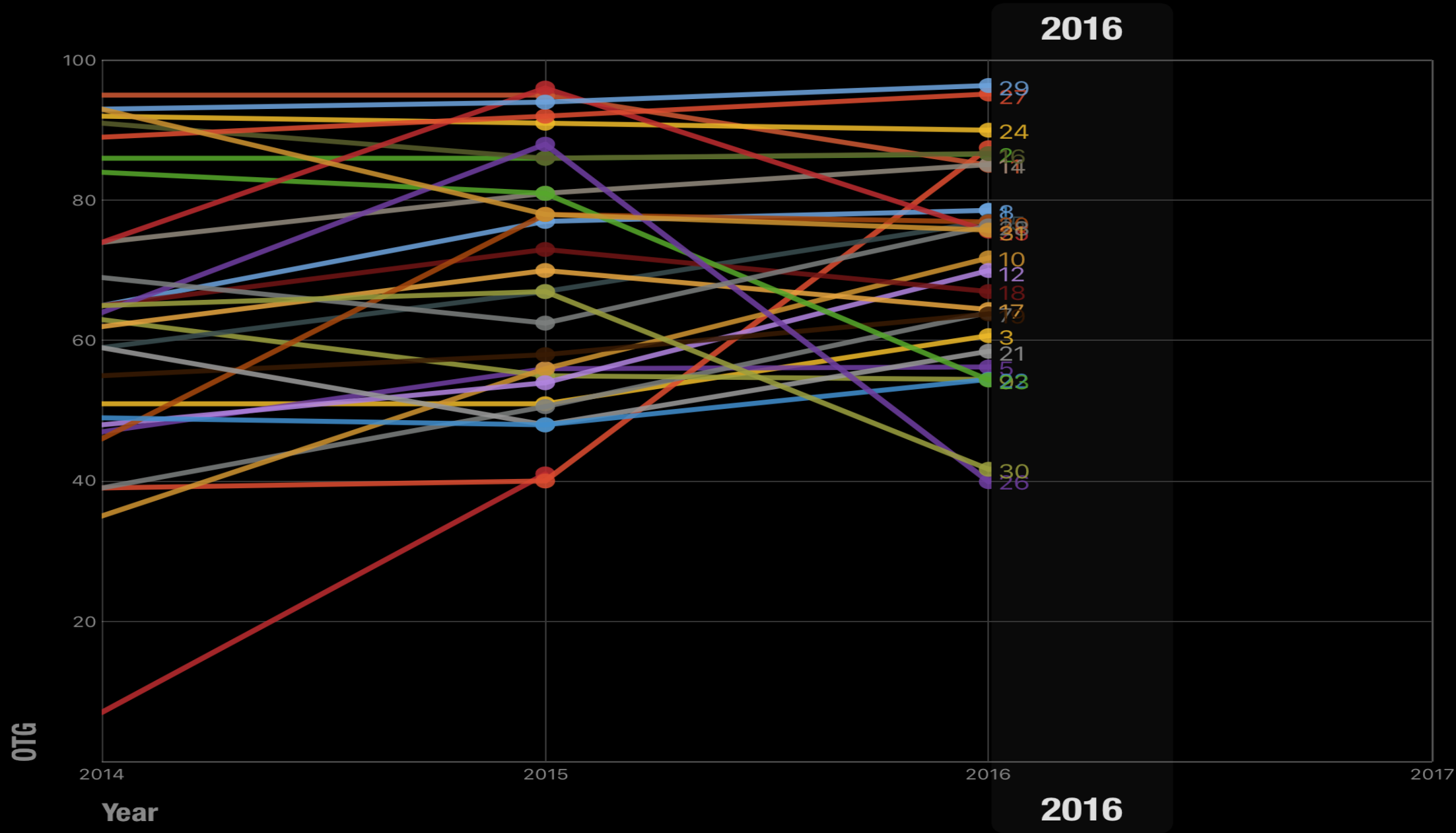
# BETWEEN PART I AND PART II: OTG 2014-2017

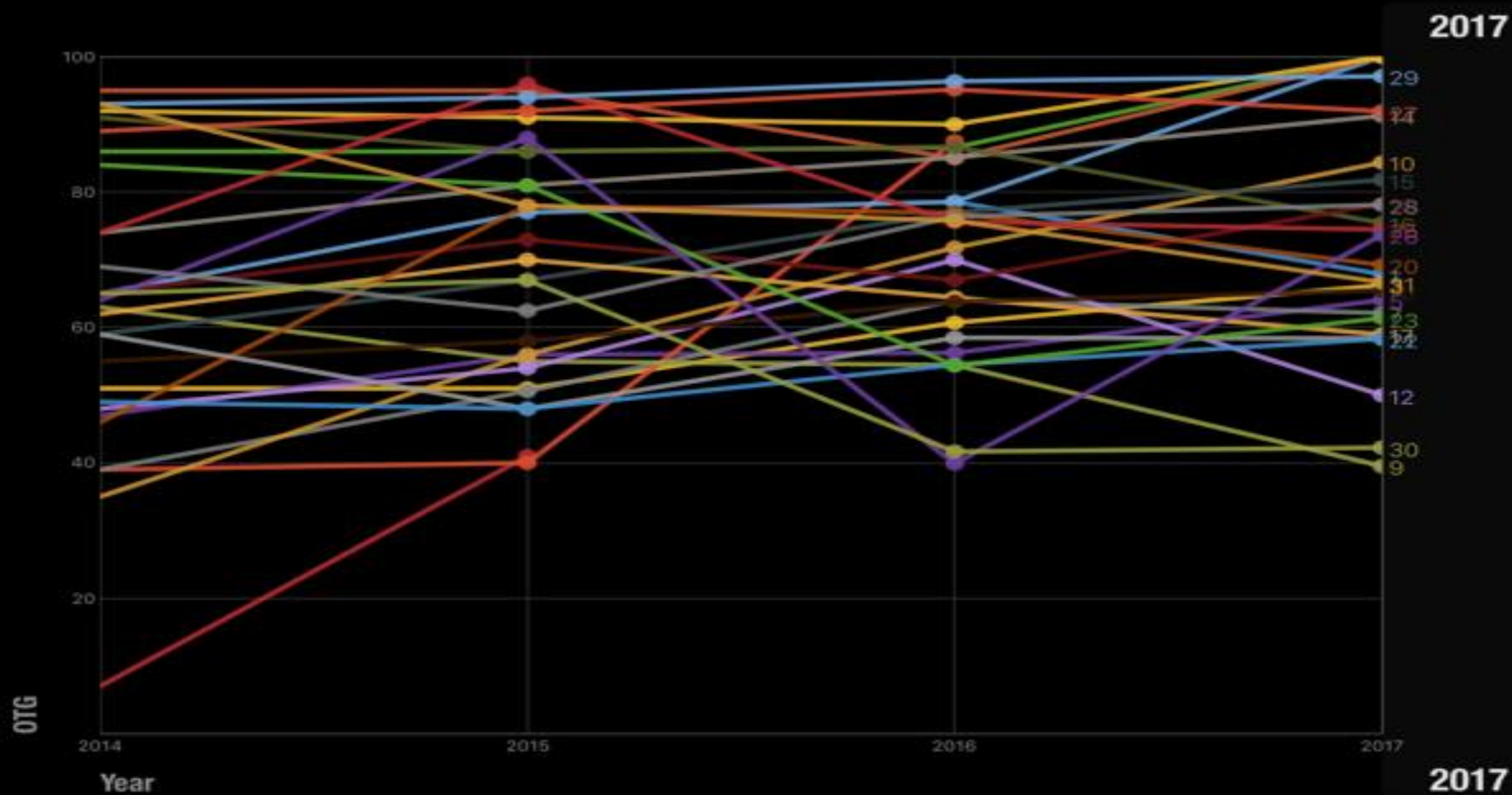
- There were 10 schools (36%) that showed improvement from 2014 to 2017.
- There were 7 schools (25%) that showed deterioration from 2014 to 2017.
- There were 6 schools (21%) that fluctuated up and down.
- There were 5 schools (18%) that were consistent. Perhaps coincidentally, they were all always above 80%.











# EDUCATION REPORT: PART II

- Explores the relationship of NCLEX and On-Time Graduation
- Evolution of the Program **OUTCOME** Index (POI, 0-200, 2014-2016) to Program **QUALITY** Index (PQI, 0-100)
- Explores attributes of schools and the relationship with PQI



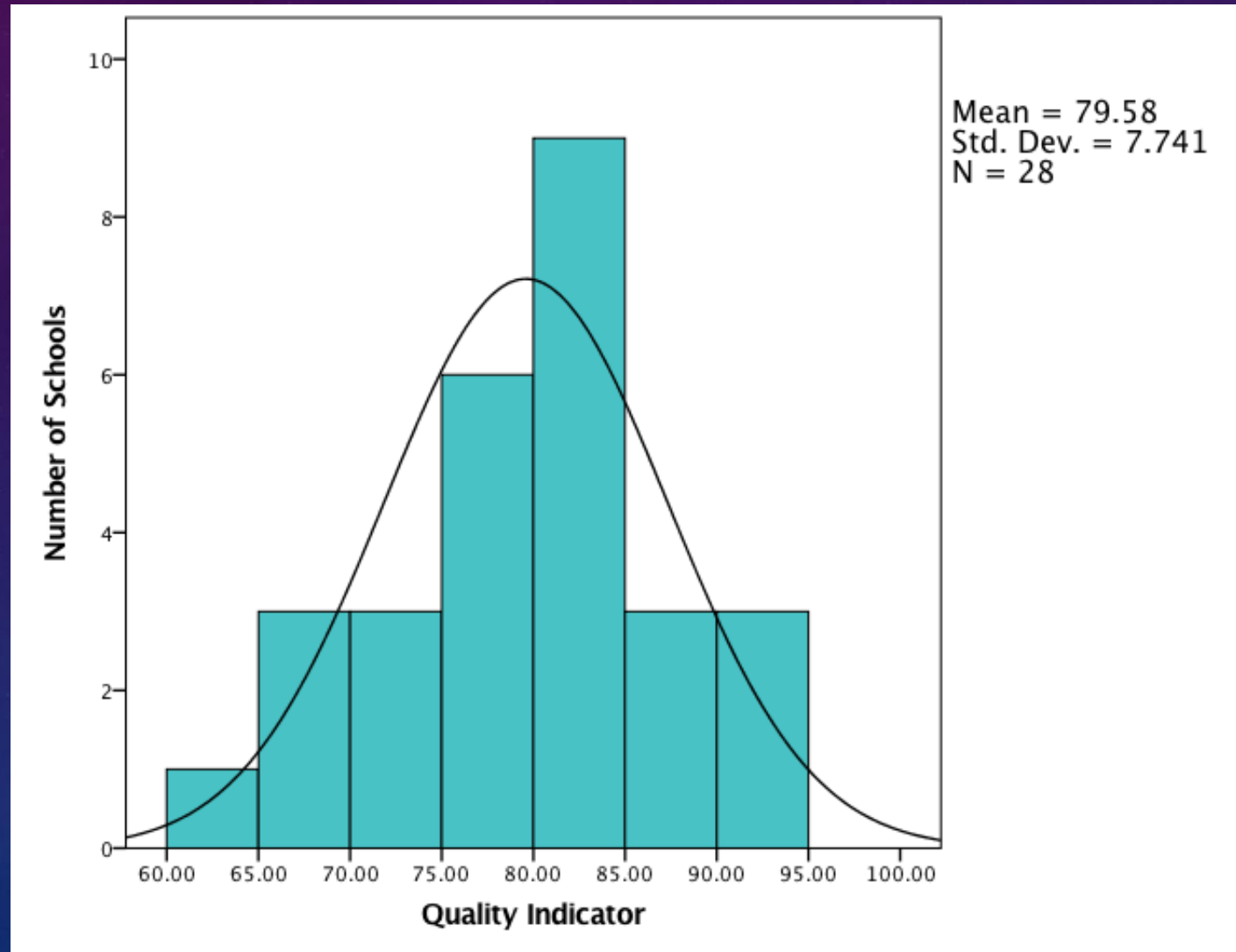
# WAS THE SUMMATIVE PROGRAM OUTCOME INDEX STATISTICALLY SOUND?



More analysis was needed to resolve similarities and differences that did not “hang together”.



IF YOU MULTIPLY OTG RATE TIMES A WEIGHT CONSTANT, THEN ADD IT TO NCLEX PASS RATE, AND SUBTRACT A CONSTANT YOU CREATE A METRIC THAT RANGES FROM 0 TO 100

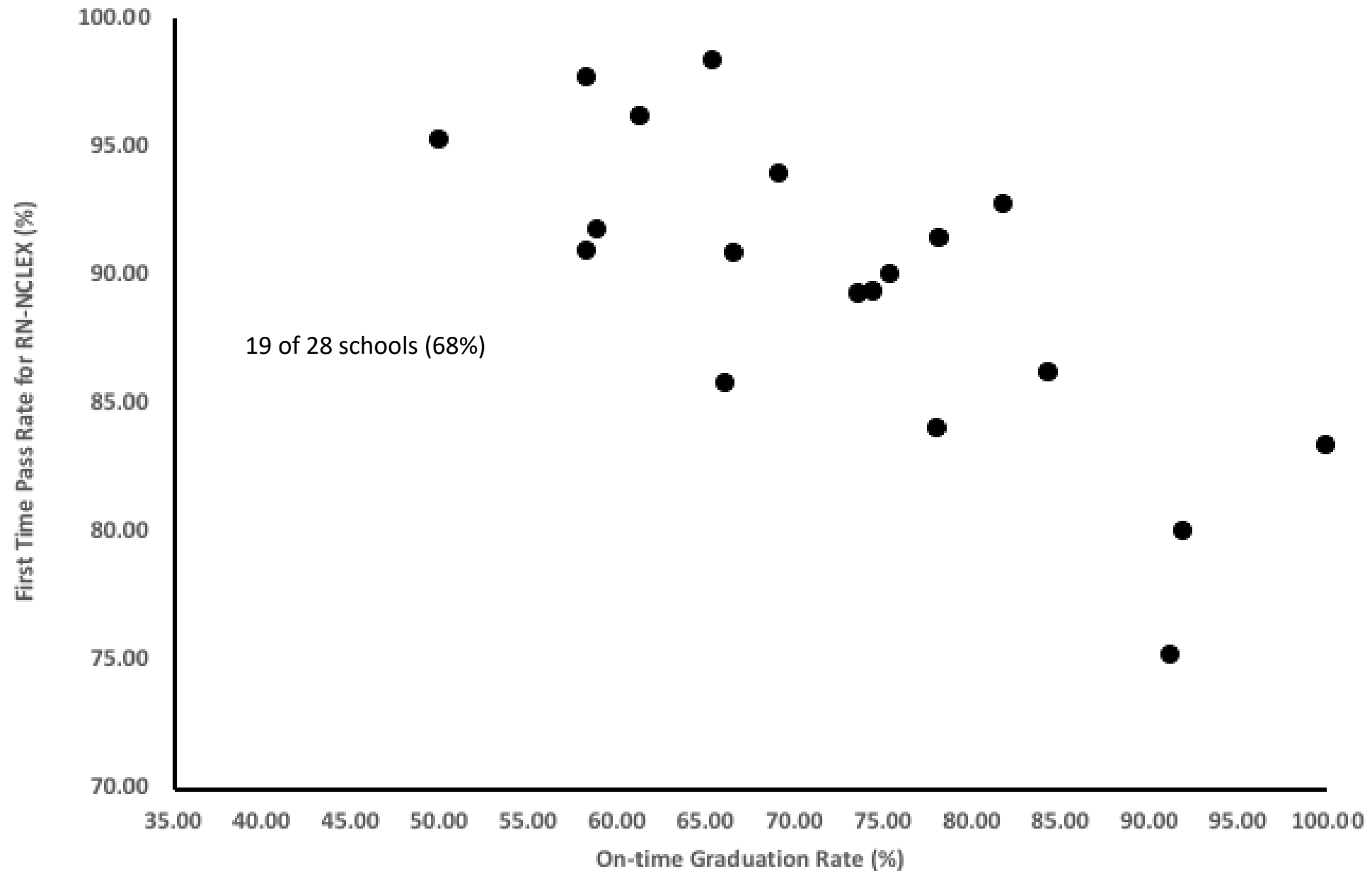


## NCLEX AND OTG

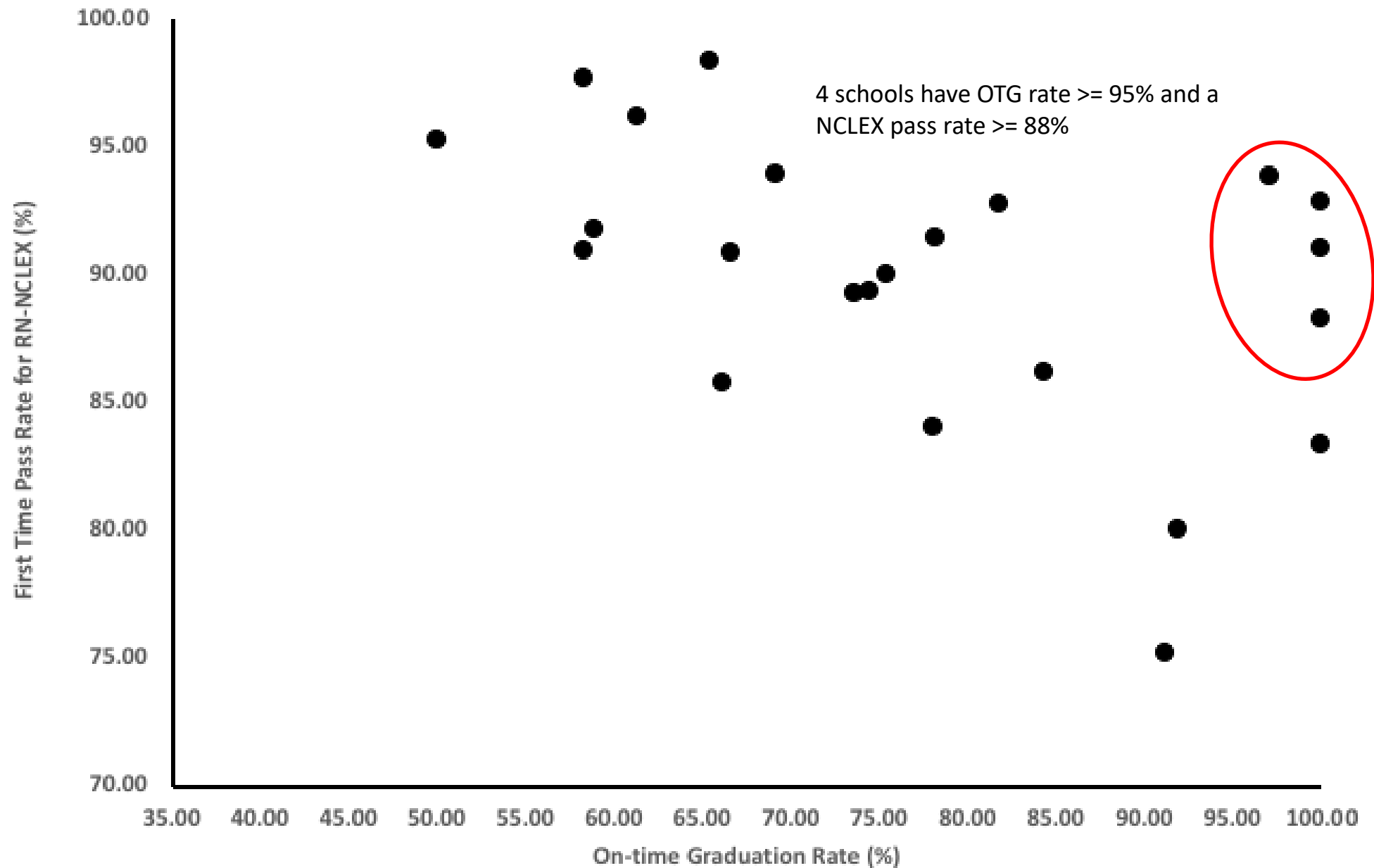
- \*28 RN schools examined
- For the majority of programs, there is a strong, inverse relationship ( $r = -.76, n = 19, p < .001$ ) between NCLEX and OTG
- The higher the percentage of students graduating on time the lower the percentage of students passing the NCLEX on the first try (Question: 100% vs 150%)
- Outliers (schools with high NCLEX & OTG; Schools with low NCLEX & OTG)

\*32 schools were surveyed in 2017, 28 RN Schools + 4 LPN Schools

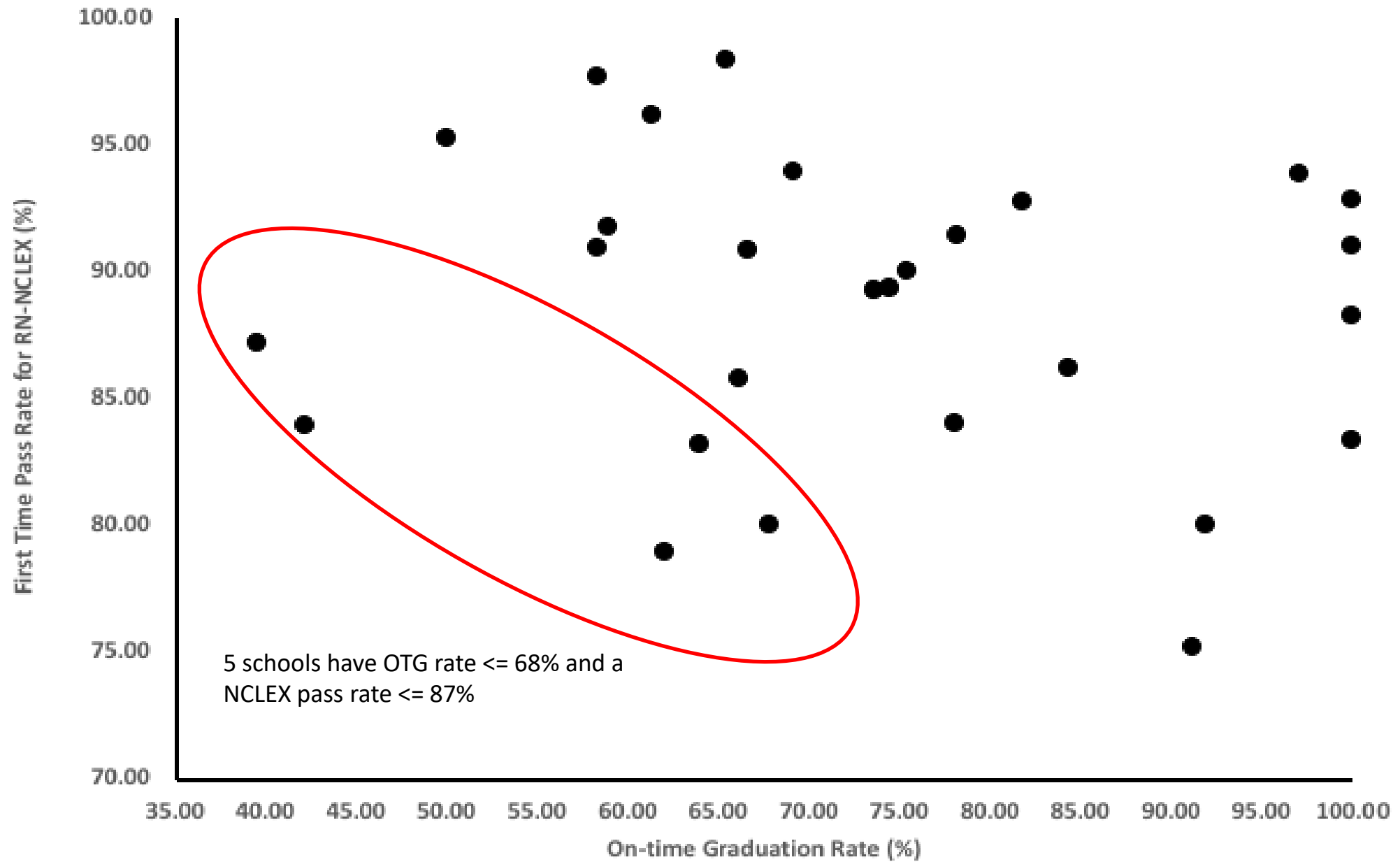
Schools with RN Programs in 2017



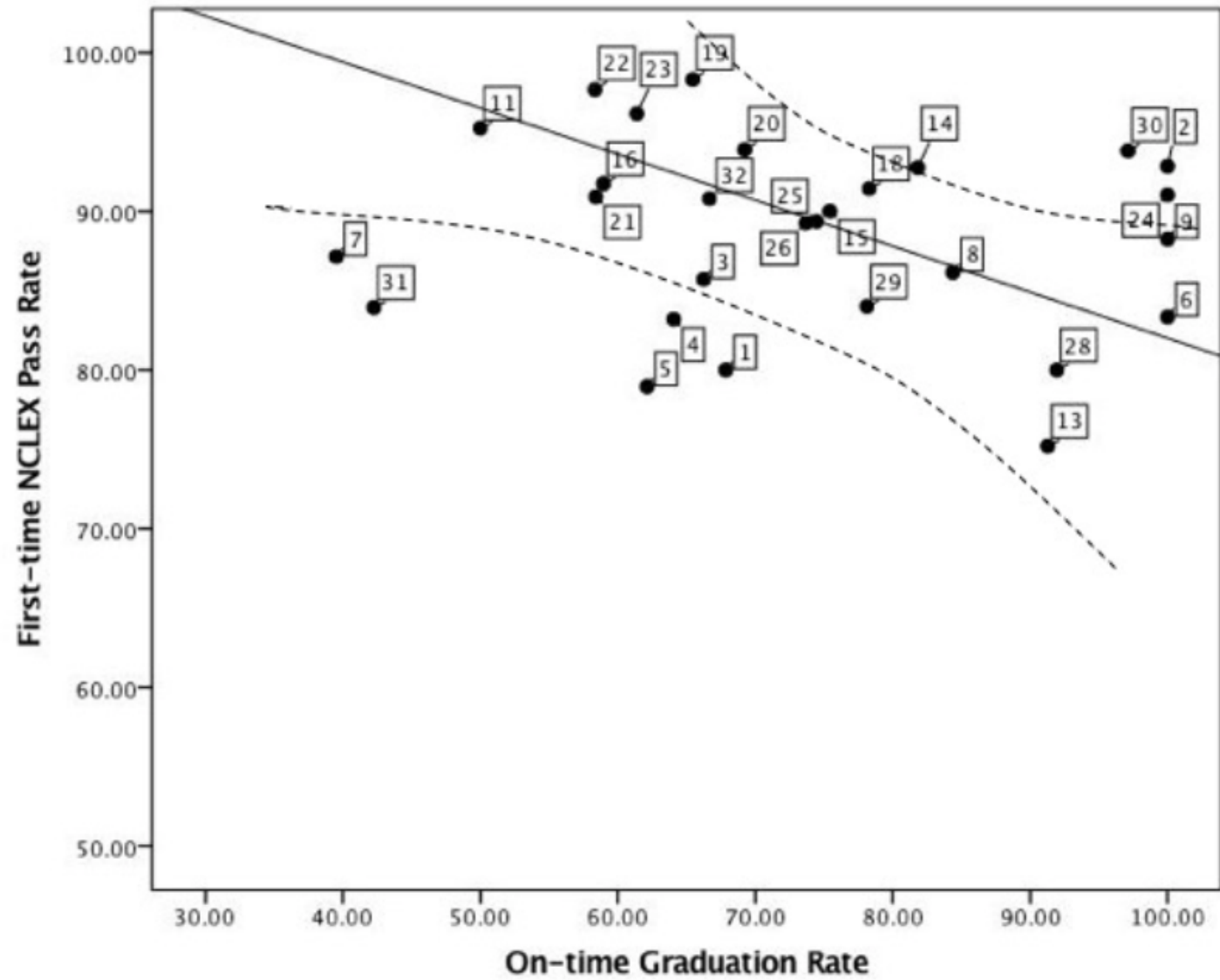
Schools with RN Programs in 2017



Schools with RN Programs in 2017

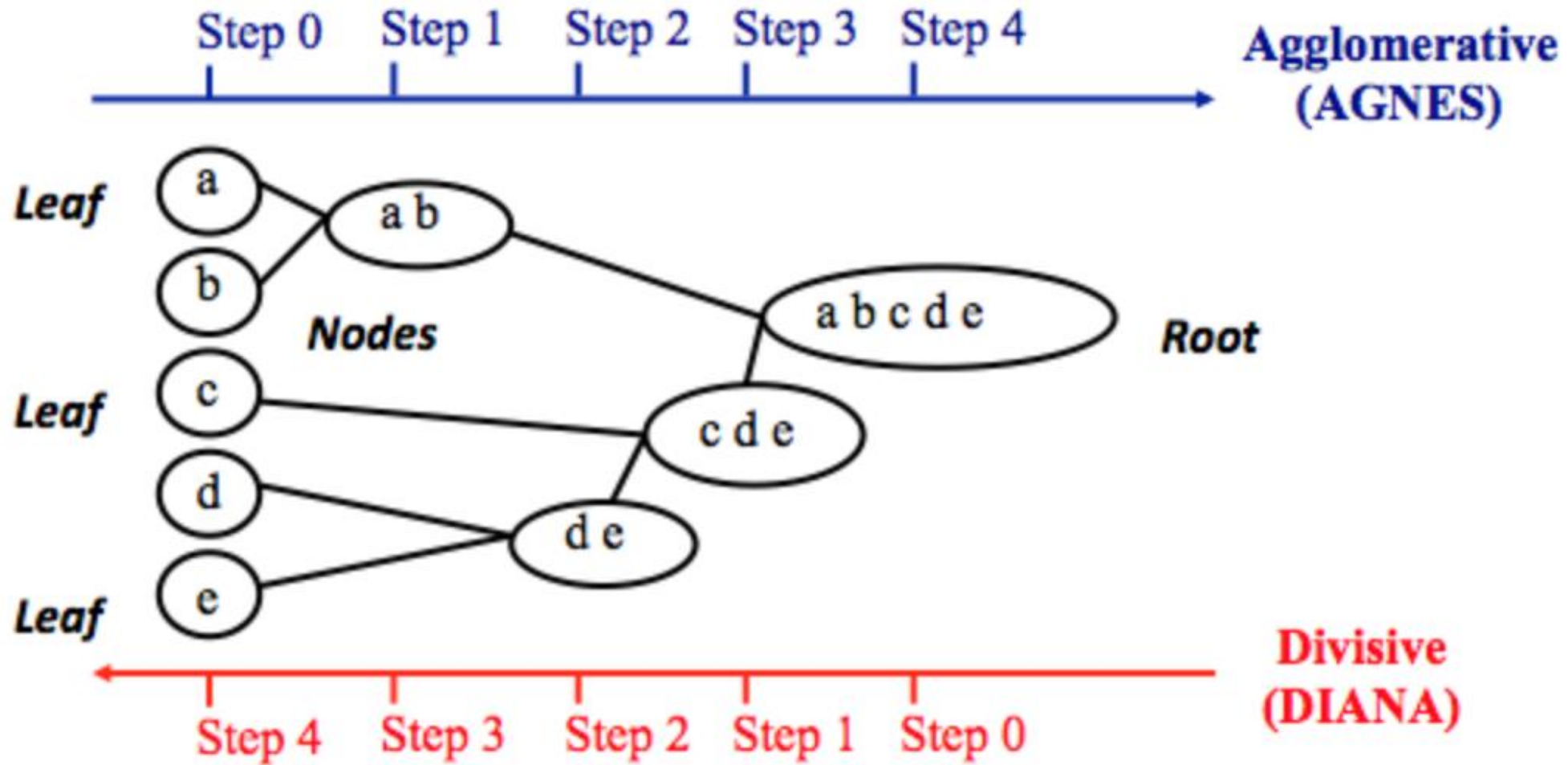






THE INVERSE RELATIONSHIP HAS OCCURRED  
EVERY YEAR SINCE 2014.

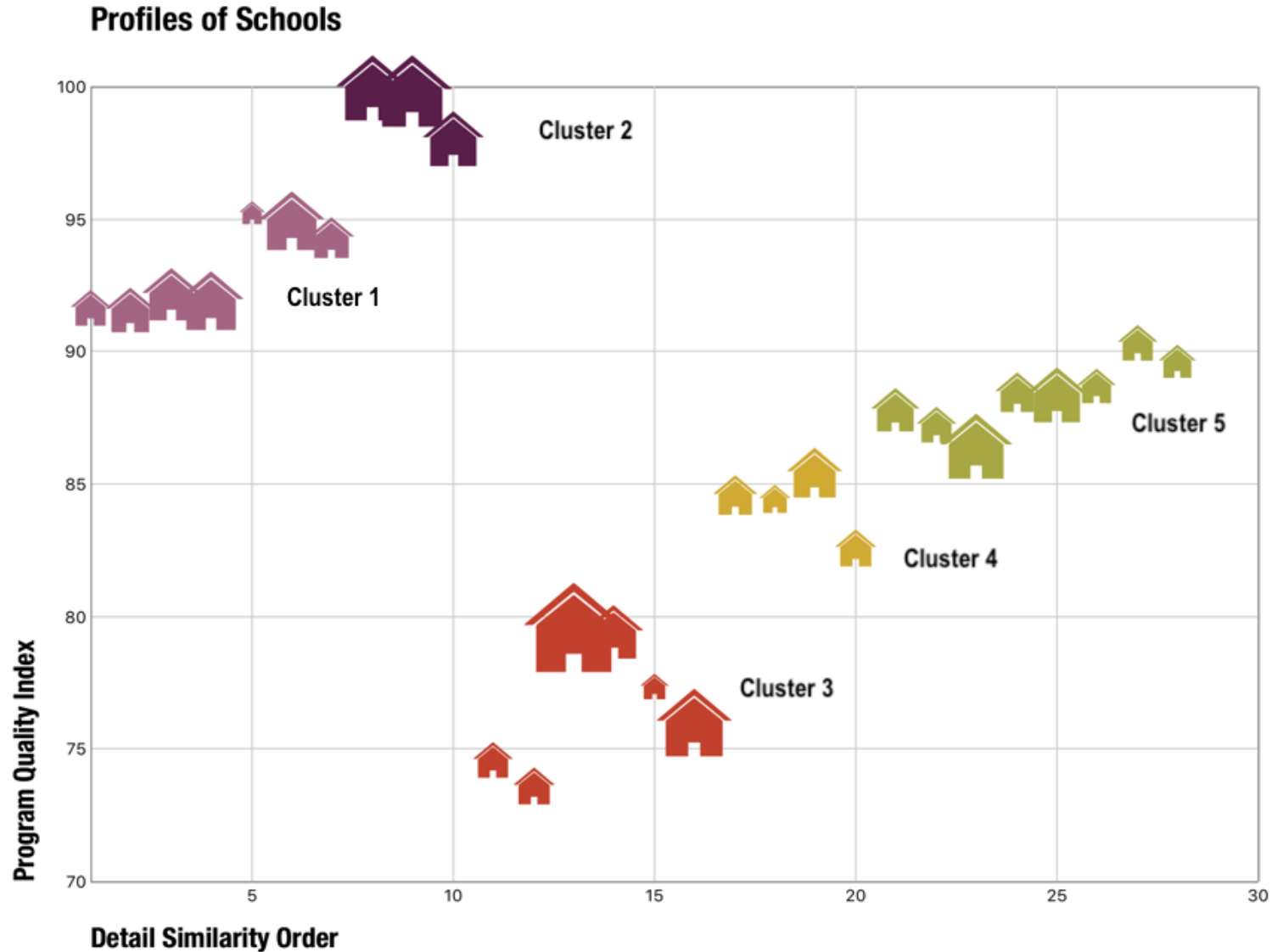
# AGGLOMERATIVE CLUSTER ANALYSIS (AGNES)



# WHAT ATTRIBUTES WERE EXAMINED? (N = 40)

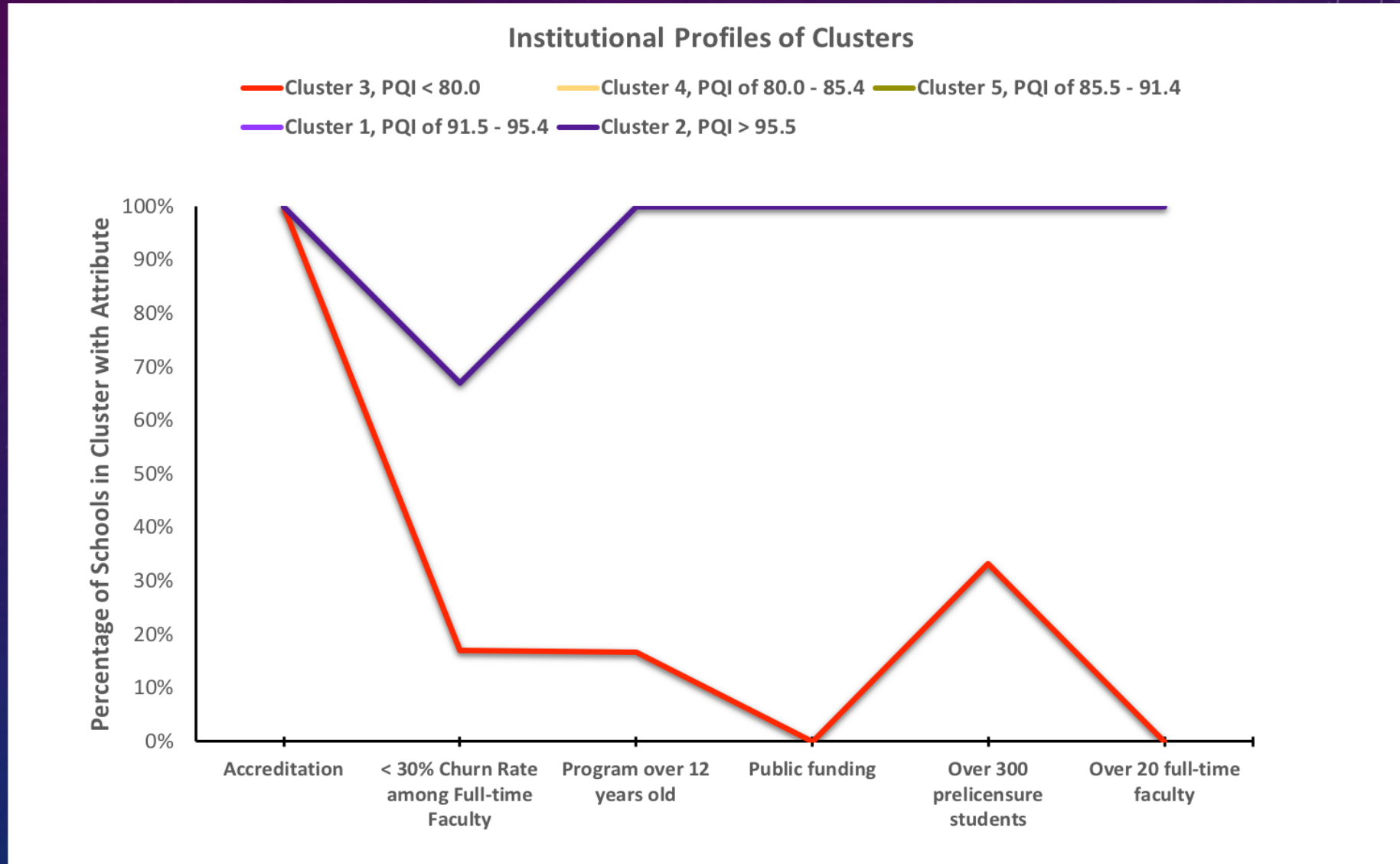
Principal prelicensure degree	Number prelicensure students	Number of full-time faculty
Prelicensure degree options	Percent male students	Number of part-time faculty
Postlicensure degree option	Percent minority students	Ratio of FT to PT faculty
Post-graduate programs	Percent students over 30	Percent FT faculty
School type	Percent male FT faculty	Percent FT faculty vacancies
Location type	Percent minority FT faculty	Percent PT faculty vacancies
Accreditation	Percent FT faculty over 50	FT faculty turnover
Age of the school	Percent FT masters faculty	PT faculty turnover
Admissions capacity	Percent FT doctorate faculty	Average class size (didactic)
Admissions	Percent male PT faculty	First clinical course capacity
Percent admission capacity	Percent minority PT faculty	First clinical course enrolled
Selectivity - Invited	Percent PT faculty over 50	Percentage clinical capacity
Selectivity - Enrolled	Percent PT masters faculty	
Number of graduates	Percent PT doctorate faculty	

# HIERARCHICAL CLUSTER ANALYSIS & SIMILARITY INDEX

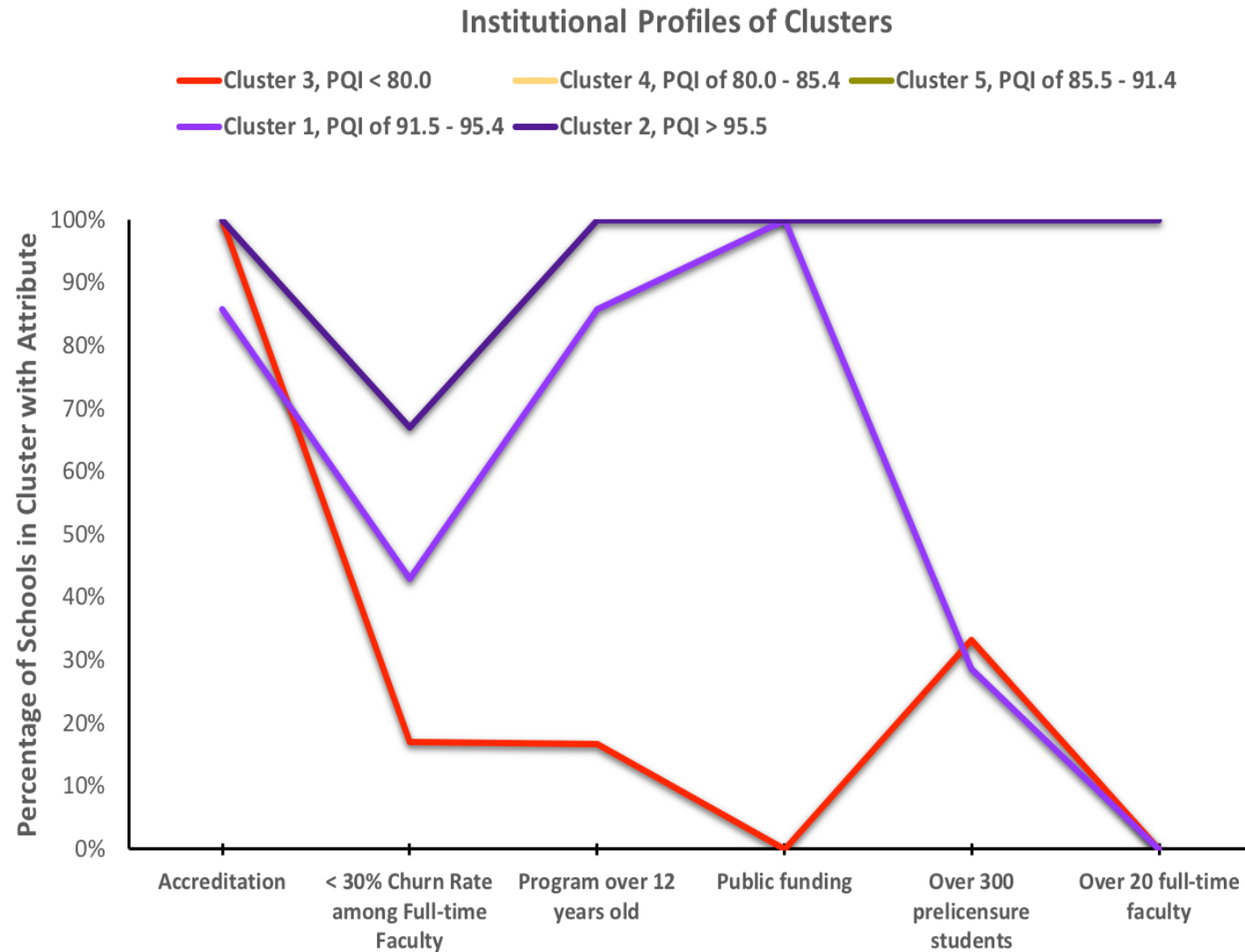




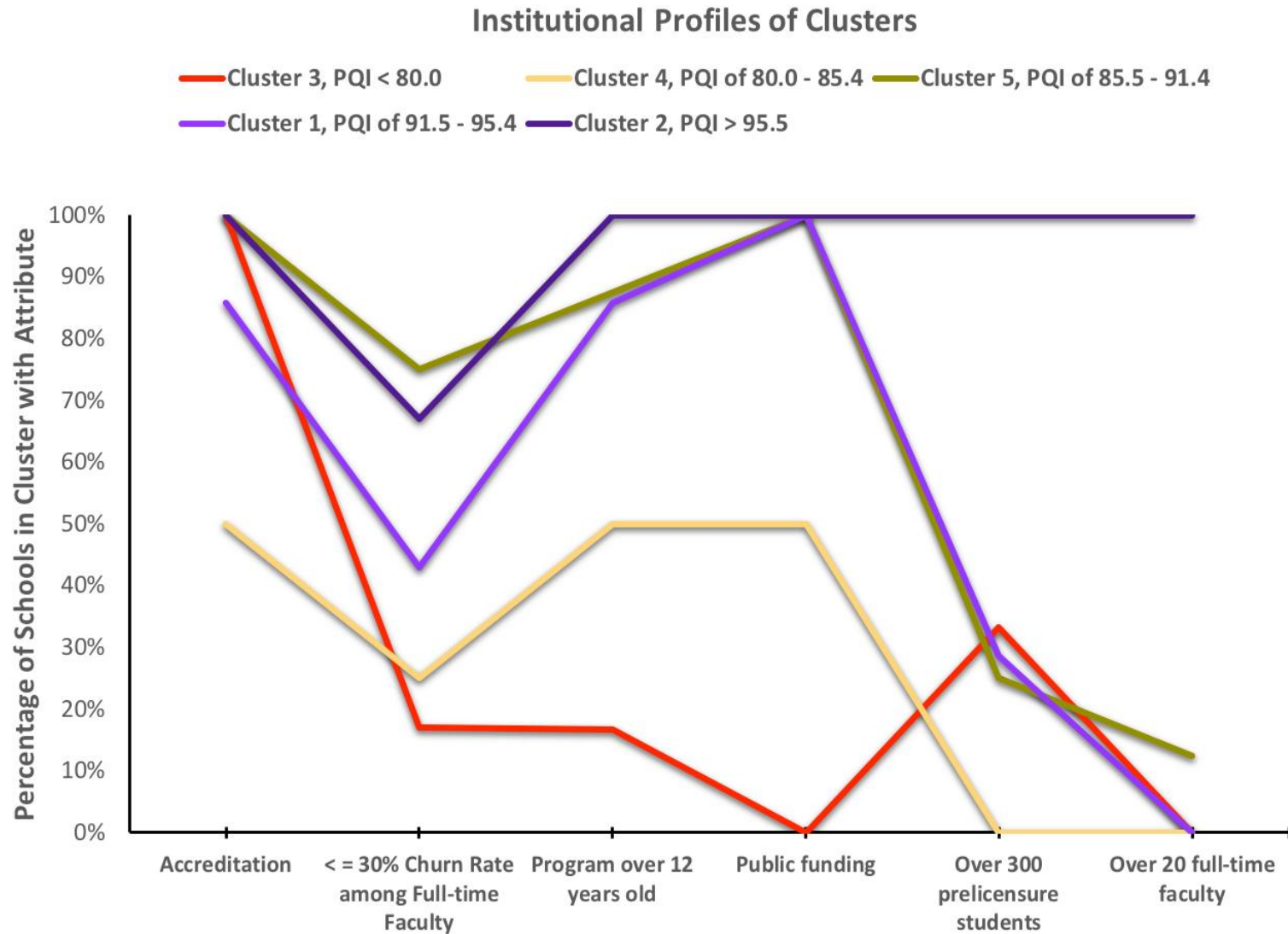
# CLUSTER 2 (PURPLE) & CLUSTER 3 (RED) SIX ATTRIBUTES



# CLUSTER 1 (VIOLET) CLUSTER 2 (PURPLE) & CLUSTER 3 (RED) SIX ATTRIBUTES

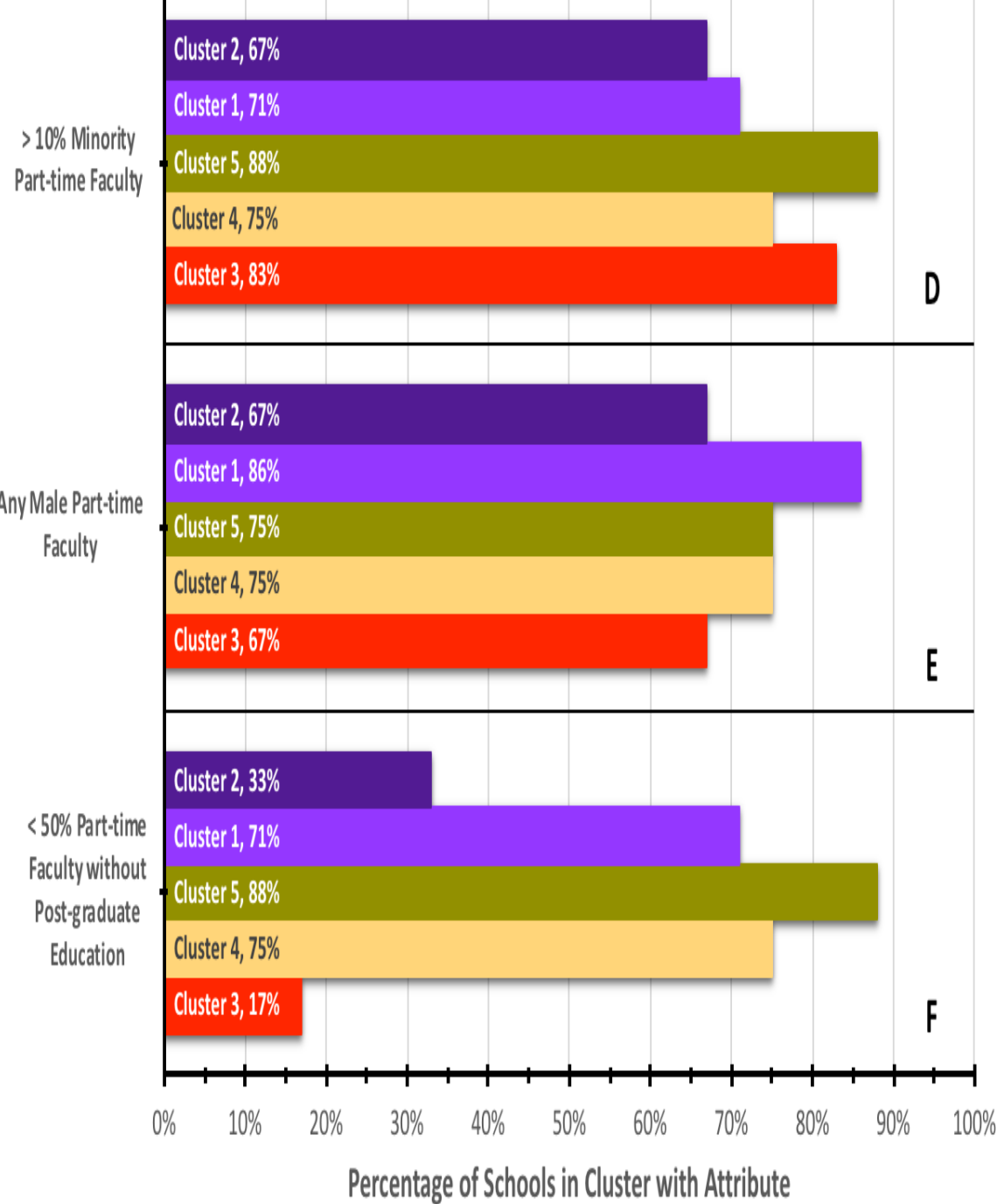
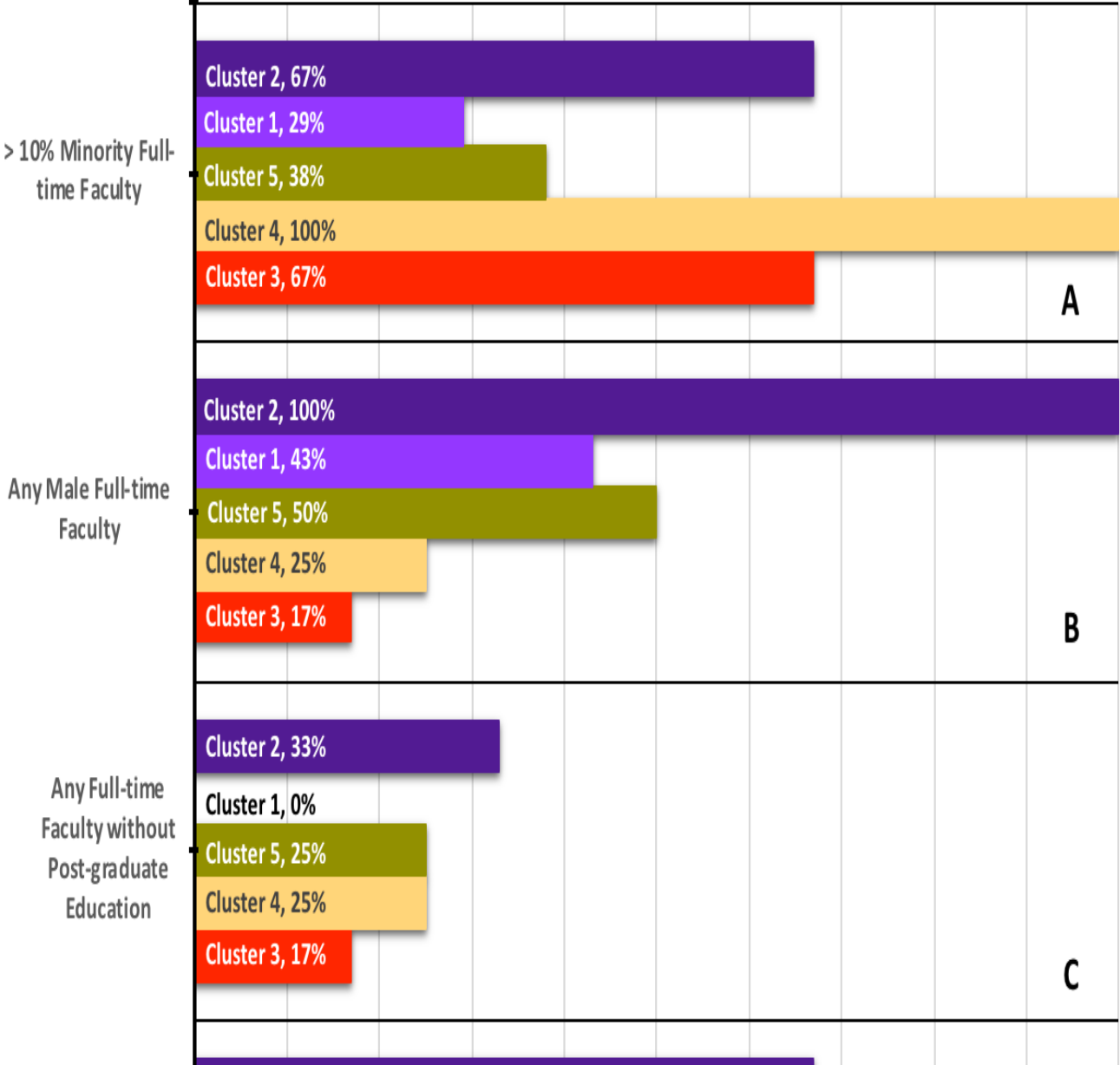


# ALL FIVE CLUSTERS AND SIX ATTRIBUTES



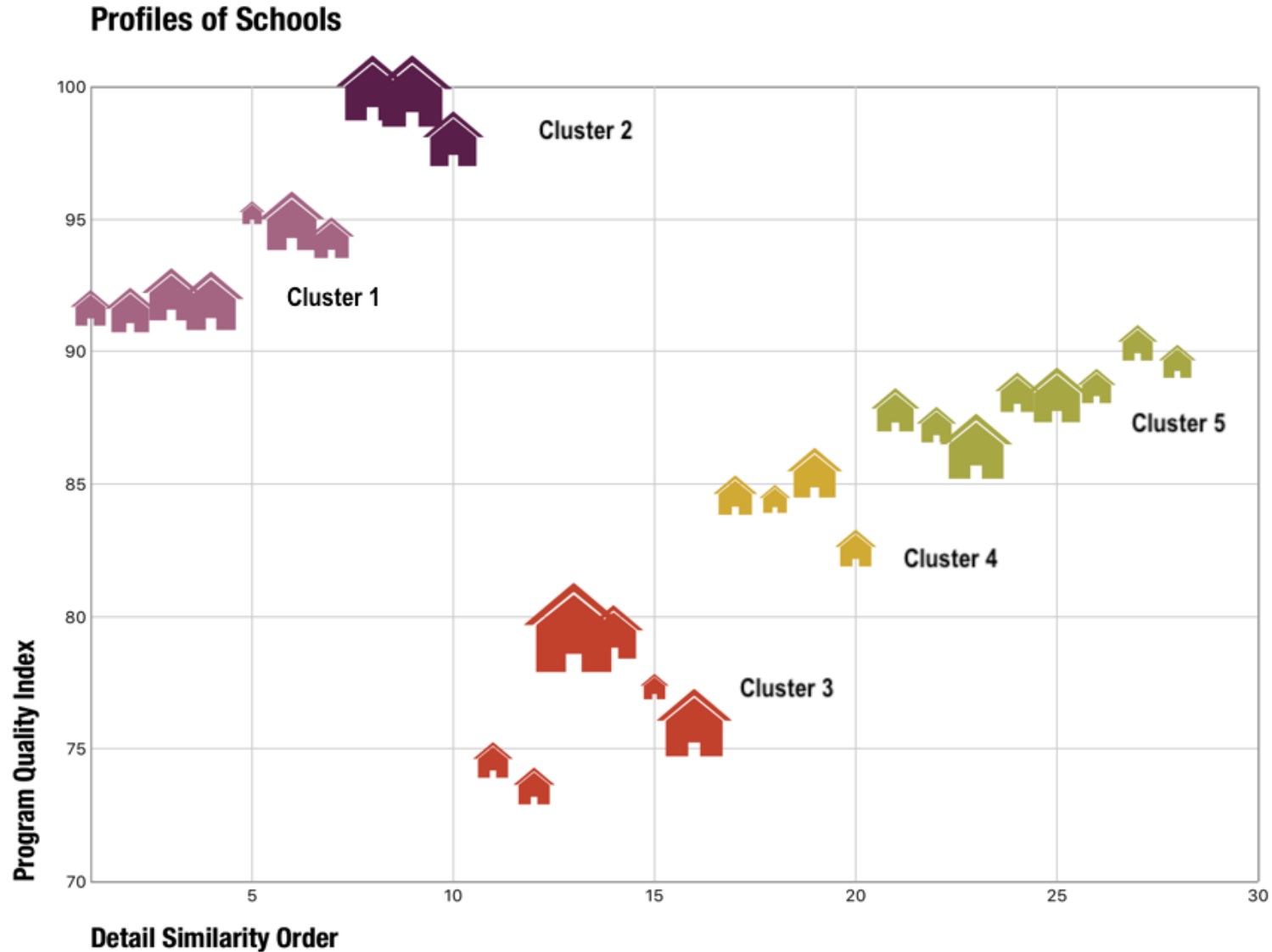
# FACULTY DIVERSITY AND PQI

Diversity Profiles of Clusters: Faculty





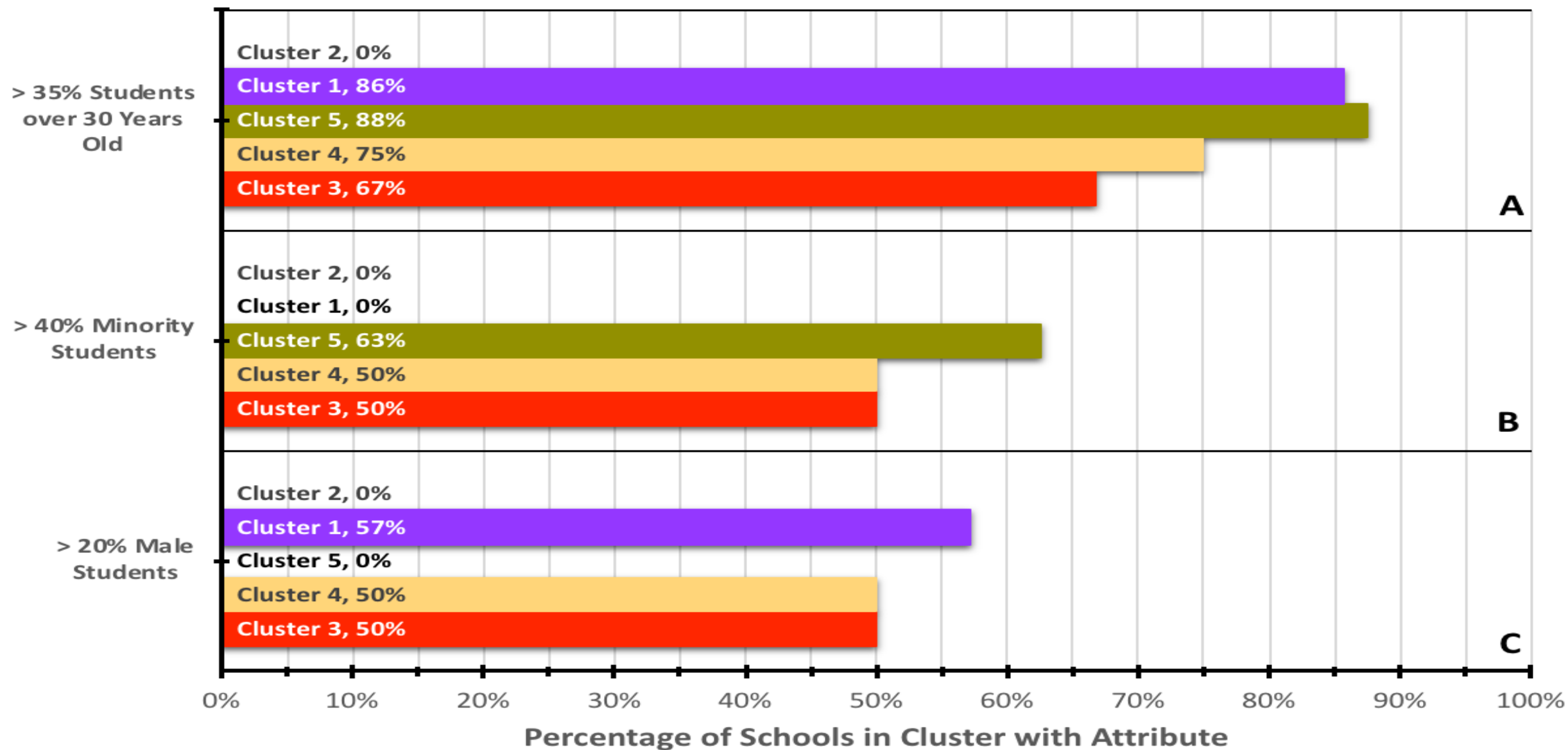
# HIERARCHICAL CLUSTER ANALYSIS & SIMILARITY INDEX



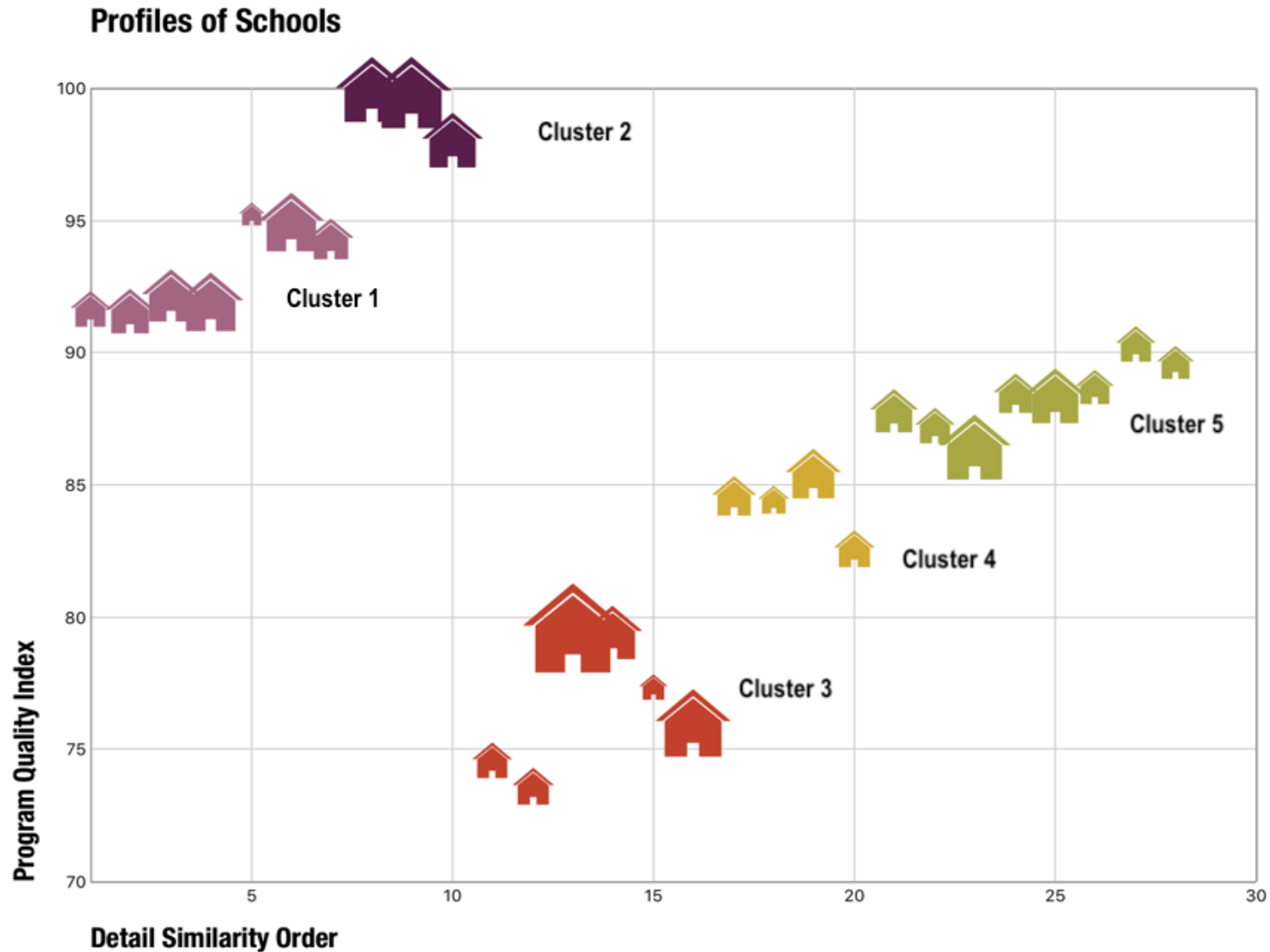
# STUDENT DIVERSITY AND PQI



## Diversity Profiles of Clusters: Students



# HIERARCHICAL CLUSTER ANALYSIS & SIMILARITY INDEX



# AACN REPORTS: PRE-LICENSURE BSN



***Table 1-a. 2017 Pre-licensure Bachelor of Science in Nursing Programs: Number of Seats, Applicants, and Students***

<b>School Name</b>	<b>Seats</b>	<b>Applicants</b>	<b>Qualified</b>	<b>Offers</b>	<b>Enrolled</b>
Arizona College	500	362	250	250	250
Arizona State University	240	444	426	237	235
Brookline College	278	278	234	234	196
Chamberlain University	355	352	311	311	267
Grand Canyon University	384	737	737	382	366
Northern Arizona University	180	532	359	189	180
University of Arizona	108	317	271	108	104
<b>Total</b>	<b>2045</b>	<b>3022</b>	<b>2588</b>	<b>1711</b>	<b>1598</b>

# AACN REPORTS: RN-BSN

***Table 2-a. 2017 Registered Nurse to Bachelor of Science in Nursing Programs (RN-BSN):  
Number of Seats, Applicants, and Students***

<b>School Name</b>	<b>Seats</b>	<b>Applicants</b>	<b>Qualified</b>	<b>Offers</b>	<b>Enrolled</b>
Arizona State University	200	200	196	196	121
Brookline College	17	17	17	15	15
Chamberlain University	207	207	207	207	131
Grand Canyon University	5523	5523	5483	5483	5483
Northern Arizona University	800	830	798	720	660
University of Phoenix	979	979	858	858	601
<b>Total</b>	<b>7726</b>	<b>7756</b>	<b>7559</b>	<b>7479</b>	<b>7011</b>

# AACN REPORTS: MS-NP

***Table 3-a. 2017 Master's-level Nurse Practitioner Programs: Number of Seats, Applicants, and Students***

<b>School Name</b>	<b>Seats</b>	<b>Applicants</b>	<b>Qualified</b>	<b>Offers</b>	<b>Enrolled</b>
Chamberlain University College	175	180	175	175	123
Grand Canyon University	500	428	424	424	418
Northern Arizona University	75	99	96	79	57
University of Phoenix	410	246	197	197	177
<b>Total</b>	<b>1160</b>	<b>953</b>	<b>892</b>	<b>875</b>	<b>775</b>



# AACN REPORTS: DNP

**Table 4-a. 2017 Doctor of Nursing Practice Programs: Number of Seats, Applicants, and Students**

School Name	Seats	Applicants	Qualified	Offers	Enrolled
Arizona State University	85	203	163	97	82
Chamberlain University	15	16	15	15	12
Grand Canyon University	584	589	584	584	555
Northern Arizona University	11	11	11	11	9
University of Arizona	144	208	154	94	44
<b>Total</b>	<b>839</b>	<b>1027</b>	<b>927</b>	<b>801</b>	<b>702</b>

# AACN REPORTS: MS

***Table 5-a. 2017 Master of Science in Nursing Programs: Number of Seats, Applicants, and Students***

<b>School Name</b>	<b>Seats</b>	<b>Applicants</b>	<b>Qualified</b>	<b>Offers</b>	<b>Enrolled</b>
Arizona State University	43	20	20	13	11
Brookline College of Nursing	35	35	35	35	35
Chamberlain University	40	40	39	39	29
Grand Canyon University	2506	2506	2499	2499	2420
Northern Arizona University	30	30	27	27	22
University of Arizona	350	370	315	235	112
University of Phoenix	948	948	874	874	634
<b>Total</b>	<b>3952</b>	<b>3949</b>	<b>3809</b>	<b>3722</b>	<b>3263</b>

# AACN REPORTS: PHD



**Table 6-a. 2017 Doctor of Philosophy in Nursing Programs: Number of Seats, Applicants, and Students**



School Name	Seats	Applicants	Qualified	Offers	Enrolled
Arizona State University	10	16	11	11	8
University of Arizona	23	23	23	17	13
<b>Total</b>	<b>33</b>	<b>39</b>	<b>34</b>	<b>28</b>	<b>21</b>

# KEY FINDINGS

- Ninety-four percent of Arizona's nursing programs meet the Administrative Code standard of 45% OTG.
- There is a strong, inverse relationship ( $r = -.76$ ,  $n = 19$ ,  $p < .001$ ) between NCLEX pass rates and on-time graduation.
- A cluster of ADN (Cluster 1,  $n = 7$ , PQI 91.5-95.4) and BSN (Cluster 2,  $n = 3$ , PQI  $> 95.5$ ) schools consistently achieve high NCLEX and OTG rates. Shared characteristics of these schools include programs older than 12 years, publicly funded institutions with accreditation. They differ in student body size (large/small programs, fewer faculty and differences in faculty churn rate (more/less than 30% turnover for full time faculty)).
- Schools with middle range PQI scores, Cluster 4 ( $n = 4$ , PQI 80.0 – 85.4) and Cluster 5 ( $n = 8$ , PQI 85.5 – 91.4) tended to be small, Associate's degree schools with small full-time faculties and high churn rates.
- Schools with the lowest PQI schools were young, smaller, privately funded institutions with a small, full-time faculty and high rates of churn (Cluster 3,  $n = 6$ , PQI =  $< 80$ ).
- School cluster analysis suggests that well-established, publicly funded schools are more likely to achieve high PQI scores. To a lesser extent, it seems that schools with a large student body supported by a large, stable, full-time faculty achieve higher PQI scores. The type of degree offered and nursing accreditation were not associated with achieving high PQI scores.
- The effect of student and faculty diversity on PQI is unclear. Some schools successfully overcome challenges. There is substantial unused capacity of generic BSN programs ( $n = 447$  unfilled, available seats, Table 2-a.). Almost all of this unused capacity exists in private schools.
- All nursing graduate programs (Masters, DNP, PhD) have unused capacity and most of these seats are available in private programs.

## RECOMMENDATIONS

- **Recommendation 1: Increase the clarity of defining and using on-time graduation data.**
- **Recommendation 2: Examine factors that promote On-Time Graduation (OTG).**
- **Recommendation 3: Systematically examine student and faculty demographics and faculty educational advancement.**
- **Recommendation 4: Systematically examine capacity, admissions, and enrollment statistics for each nursing education program.**
- **Recommendation 5: Develop data collection methods that improve the ease of data entry, efficiency of data analysis, and effectiveness of data reporting.**



## SO WHAT?

- Is this data of interest?
- How can you use the data?
- Are there data we should stop collecting?
- Are there data we should start collecting?
- How can we better coordinate with data that schools already collect?